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should not be exclusive except of what would destroy it. It should be inclusive of all the good in the stream of people constantly flowing through the country. And what a stream this is to draw from ! No other city offers us such advantages. If the nucleus were permanent, those invited might shift without injury to the central idea ; and thus each turn of the political wheel would bring men of note from different parts of the nation who could be drawn in during their long or short tenure of office to brighten and enlarge the conservative brain of the organization ; a common consciousness, alive to all changing impressions, yet capable of retaining the good of them permanently in a way that would waste nothing, but, on the contrary create continually new and higher forms. Under such circumstances, each individual would have the opportunity of bringing forth his or her best by union with the highest social achievements of all. Whether blossom or fruit, it should be welcome, for fragrance and beauty have their place no less securely than flavor and nourishment. Indeed, as Anglo-Saxons we can be safely trusted to take care of our nourishment, but we need stimulation to bring sufficient beauty into our lives. Surely, however, we are old enough as a social whole to have grown beyond the simple needs of the infant—food and warmth. These we can get at almost any entertainment, as also the satisfaction of the savage, who adds to the infant's wants those of clothing and shelter. Such demands are undeniably primitive. Let us strive for something more adequate to our desires as civilized human beings,—intelligent conversation, the play of minds at ease, the delicacy of gentle breeding, which far from leaving diamonds in the rough, makes jewels of common stones.

L. B. HALSTED.

THE HUMAN AMŒBOID.

WHEN my friend awoke the morning after a night at the club and facetiously spoke of himself as a "demoralized community," he probably did not intend to give a scientific description of himself. But that is exactly what his time-honored witticism was : he was literally a demoralized community.

Each of the millions of individuals which make up the grand resultant known as my convivial friend has a life-history of its own ; each has its birth, followed by successive periods of growth, maturity, and decline, ending in death ; and the night's festivities at the club had their demoralizing effect upon each individually, as well as upon the community collectively.

There is a scientific foundation for the town of Mansoul to rest upon that the Bedford Tinker never dreamed of in all his wonderful dreaming. Those embattled walls, with their eye-gate, their ear-gate, and all their other gates, the dwellings, strongholds, streets, alleys, and crowded population within, are more than the baseless fabric of a dream.

The individual in the microcosmic community is the amœboid cell. When it begins its life as a white blood-corpuscle, it is scarcely distinguishable from that little creature so familiar to the microscopist, the amœba. It swims along in the hæmal river, like a little fish in the Mississippi, in quest of food, oxygen, and its final destiny. What that destiny is to be there is nothing about it as yet to determine. As there is no telling whether a particular infant is to become doctor, lawyer, merchant, or priest, president or hod-carrier, so there is no telling in what sphere of usefulness this little creature may settle when it has finished its career of independent roaming. It may rise to a seat in the House of Lords, on the Supreme Bench, or in the

Royal Academy, all of which august bodies hold their meetings beneath the cerebral dome; it may take a booth in one of the markets along the shores of the Alimentary Canal; it may go into the business of transportation in the Grand Cardiac Depot; into telegraphy on one of the Neural Lines; into the street-cleaning and garbage-removing department on Pulmonary Avenue, Renal Park, or Hepatic Square; its humble lot may be that of a common laborer in the Biceps Flexor or the Triceps Extensor, or, humblest of all, that of a half-alive, underground worker in the Bony System. But whether its lot be high or low, it will be one of absolute specialization.

The amoeba has been called a zoölogical paradox, because it moves without muscles, feels and perceives without nerves, eats and digests without a mouth or stomach, breathes without lungs, gills, or branchiæ—in short, performs all the essential functions of a living being without organs. It is, however, no more truly a paradox zoölogically than the lowest races of savages are a paradox economically, who without being professional armorers arm themselves, without being professional tailors or mantua-makers clothe themselves (in a way), without being professional architects, farmers, provision-dealers, bakers, or fishermen, shelter and feed themselves. The savages simply are not armed, clothed, sheltered, or fed as well as those more favored classes who dwell in organized, differentiated society, where each individual has, or is supposed to have, his own special work to do, and to each of whom it is no reproach that he cannot do the work of other specialists.

It is not true that the amoeba moves without muscle: the creature is itself a single muscular cell. Neither does it feel and perceive without nerves: its whole body is a single nerve cell. At the same time it is a digestive and assimilative cell, an oxygen-absorbing and carbonic-acid-excreting cell,—it may even be (as in the case of the *foraminifera*, which are only amoebæ secreting a limy test around themselves) a bone cell. Having so many diverse functions to perform all at once, it cannot, of course, excel in the performance of any one of them, as the savage Jack-of-all-trades, to whom we have compared it, cannot compete in the performance of any one of his numerous functions with his civilized and specialized brother.

If the amoeba-like white blood-corpuscle roaming along the hæmal current is finally drafted as a recruit to some wasted muscle, it becomes at once specialized, its whole vital energy being concentrated upon its one duty of contracting or expanding at the bidding of its nerve-masters. So to whatever other tissue it may be attached, whether nervous, vascular, or osseous, for the remainder of its brief life all its energy is devoted to the performance of its single function.

As in the microcosm, so in the macrocosm: each individual is at first a white blood-corpuscle in the body politic. And the great organism of which he becomes (or may become) a mere specialized cell, exists not for his particular benefit, nor for that of any individual or class of his fellows, but for itself as an organism. As such it is improving at the expense of its individuals. It is making great and rapid strides in its mastery over the forces of nature, in its stores of information in all departments of knowledge, in the cultivation of art and artisanship. Men are better housed, lighted, warmed, clothed, and fed than ever before; they travel with greater speed, comfort, and economy; they are better protected from disease and violence; they have better means of intercommunication and exchange of commodities; in short, all the conditions of organized society are wonderfully improved, and

are still improving with ever-increasing rapidity. And yet man as an *individual* is deteriorating, not in spite of, but in consequence of, these prodigious ameliorations in his condition.

Multiplying and magnifying the means of improvement and enjoyment, without at the same time correspondingly lengthening the term of life and enlarging the receptive capacity, offer but one advantage, that of *choice*; and this very advantage has the effect of increasing the tendency to specialization, which is only another name for narrowness. It does not swell the man into a larger sphere, but simply sharpens him to a finer point.

The world has already made too much history and eminent biography. The broadest mind, the most tenacious memory, can comprehend but the barest outlines, and for adequate study must content itself with fragments. The same applies to science, art, everything. Hence everywhere the race of man is told off into details. The intellectual class divides up its domain into lots, and assigns them to its settlers, as the United States Government assigns its territorial freeholds. The sky is partitioned off among astronomers like so much Western territory. In philology one man devotes his life to the third declension of one language, and at the end laments that he "has not confined himself to the dative case."

In the arts it is still worse. Time was when one man made a watch. Now he makes only one small part of it. As a result the product is greatly improved, but the *producer* is deteriorated in still greater degree.

Enlarging the scope of action in all directions, when the scope was already too large, has very much the same effect that enlarging the earth itself would have—it proportionately diminishes the individual actor.

When, countless æons hence, Jupiter and Saturn shall be inhabited, the Jovian and the Saturnian man will be as much smaller than the terrestrial man as those giant plants are greater than the earth. Not so, however, with the Jovian and the Saturnian races. For our hundreds they will number their tens of thousands. The amœboid cells which make up the body of a frog are larger than those of a man, and each may be capable of a greater diversity of action; but compare the resultants of their coördinated action!

Shall we lament the specialization and consequent deterioration of the individual man, which thus results in the higher differentiation and finer organization of the race as a whole? or shall we school ourselves to that philanthropy which can rejoice, not in the glory of a man, but of mankind?

This is the ideal philanthropy. The truly great philanthropist is as careless of the single life as nature herself where the welfare of the race is concerned. Who are the "unborn millions" for the sake of whom we give our lives by the thousands on the battlefield? We do not think of them individually. They are only the living, coördinated cells of a vast living, breathing organism whose name is Posterity. And when the health of that great Being is imperilled, we do not hesitate to be cut off and thrown away any more than the cellular fibres of our arm would rebel at the surgeon's knife. A man is a little thing, but "many a mickle maks a muckle."

EDWARD P. JACKSON.

NO STARVATION IN RUSSIA.

ON MY arrival in this country I find your journals discussing with much ability and natural fervor the brilliant prospect of a great influx of European gold into America to result from the enormous demand which Europe is ex-